REMARKS/ARGUMENTS

Applicant respectfully requests reconsideration and allowance of the subject application.

Claims 1-57 were originally submitted.

Claims 1, 2, 15, 19, 20, 26, 36, 39, 48, 49, 52, 55 and 57 were previously amended.

Claims 58, 59, and 60 were previously added.

Claim 52 is cancelled without prejudice.

Claim 53 is currently amended.

Claims 1-60 stand rejected.

Claims 1-51, and 53-60 remain in this application.

35 U.S.C. §102

Claim 52 is rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,598,164 B1 to Shepard (Shepard). Claim 52 is canceled without prejudice.

Claim 27 is rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,188,580 to Nicolai et al (Nicolai). Applicant respectfully traverses the rejection.

Nicolai teaches a system for transmitting and receiving an encoded information signal. A unique predetermined pseudorandom code is generated at transmitting and receiving location. A synchronized tracking signal is imposed on the information to be transmitted and added to the information to form an

intermediate signal. The pseudorandom code is multiplied by the intermediate signal directly so that the ultimate result appears to assume the character of pseudorandom noise, which is then transmitted to the receiving location. The synchronization and transmitted encoded portion is decoded at the receiving location and used to generate a base signal for a pseudorandom generator at the receiving location, as well as initiate initial clocking pulse time for operation of the receiver pseudorandom generator. The receiving location generates the predetermined pseudorandom code and divides the same against the encoded signal being received to form an intermediate signal having no pseudorandom signal component, which is then filtered to remove the tracking and masking signal and thereby generating the original information signal desired. (See Abstract of Nicolai).

Claim 27 depends from claim 25 and therefore includes the elements of "a content scrambler to scramble the content using first and second keys to produce scrambled content, the scrambler embedding the first key into the scrambled content and passing the second key on a separate channel from the scrambled content" and "a content descrambler to recover the first key from the scrambled content and to receive the second key, the descrambler unscrambling the scrambled content using the first and second keys to recover the content".

Claim 27 further recites the element of "wherein the content scrambler is implemented at the client, so that the content is scrambled at the client after distribution over the network from the content provider".

The Action argues that Abstract of Nicolai teaches the elements of claim 27; however, Nicolai fails to teach the "first and second keys to produce scrambled content". Nicolai specifically provides that a predetermined pseudorandom code

is generated at both the transmitting and receiving locations. A tracking signal is imposed on the information to form an intermediate signal. The predetermined pseudorandom code is multiplied with the intermediate signal to produce a signal that has the characteristic of "noise". Nicolai fails to teach that first and second keys are used to produce scrambled content. Nicolai teaches the use of a tracking signal and a predetermined pseudorandom code. Furthermore, Nicolai fails to teach "embedding the first key into the scrambled content and passing the second key on a separate channel from the scrambled content". Nicolai fails to teach the use of a separate channel to pass keys or for any other use. There is no teaching in Nicolai as to the recited element of claim 27 of "the content scrambler is implemented at the client, so that the client content is scrambled at the client after distribution over the network from the content". The receiving location does not scramble the received content. What is actually taught in Nicolai, is the receiving location "descrambling" the signal that "looks" like noise by applying the predetermined pseudorandom code to form an intermediate signal having no pseudorandom signal component.

Nicolai fails to teach or show the elements of claim 27. Accordingly, Applicant respectfully requests that the §102 rejection of claim 27 be withdrawn.

35 U.S.C. §103

Claims 1, 2, 5, 8, 10 and 14 are rejected under 35 USC §103(a) as being unpatentable over prior art, in view of by U.S. Patent No. 6,047,069 to Hogan (Hogan). Applicant respectfully traverses the rejection.

Hogan teaches a system that encrypts data and associated redundancy bytes while retaining the error correction capabilities of the original data. The error correction function can be removed from a storage drive and performed by an entity such as a host processor. The storage drive reads raw data, including error correction codes, from the media and encrypts or scrambles the data by exclusive OR-ing each ECC block with a new ECC block generated using random data and the same ECC scheme. Error correction of the new data block can be performed in the host processor or other entity without exposing the original data. The error correction is valid for any errors that occurred in the original raw data because the ECC redundancy bytes of the random data block were created using the same ECC generator as was used with the original data. A trusted entity, such as a MPEG decoder, can decrypt the error corrected data block by creating a random data block that is the equivalent of the random data block created in the storage drive. The error corrected data block is exclusive OR-ed with the random data block and is returned to its original decrypted and error corrected state. (Hogan, Abstract).

FIG. 7 teaches that a scrambled or encrypted data block is created at the storage device and sent to a host processor for error correction across a data bus. The host processor does not have access to the actual information in the data block as it would appear in its unencrypted form, but can effectively perform error correction on the data block. Once the error correction task is completed by the

host processor, the corrected data are sent to a separate trusted entity, such as an MPEG decoder. The trusted entity must create the same random number data area that the storage device created to encrypt the user data block. For example, both the storage device and the trusted entity could use the same random number generator with the same seed. Because both devices contain the same random number generator using the same seed, the data blocks that they create are identical. The decoder does not need to decrypt any of the ECC sections. The encrypted user data are exclusive OR-ed with the random number data and returned to their original state. The decrypted or unscrambled data are then processed by the decoder and are available for consumption or playing. (Hogan, col. 5 lines 7-30).

Independent claim 1 recites "[a] client comprising:

a processor;

a memory;

one or more output devices;

a content player stored in the memory and executed on the processor to play content in the one or more output devices;

an operating system stored in the memory and executed on the processor, the operating system having processing tools for processing the content in support of the content player; and

a scrambling system to scramble the content before the content is processed by the processing tools of the operating system and to unscramble the content after the content is processed by the processing tools of the operating system,

wherein the processing tools modify the scrambled content.

The Action states that "[a]s for claim 1, Figure 2 of applicant's disclosure, which is labeled as prior art, presents one of more output devices (element 44), a content player (element 52), and a processor (element 64). The operation of these elements requires a processor, a memory, and an operating system." The Action further states that "[i]n his abstract, figure 7, and lines 7-30 of column 5, Hogan teaches processing data while it is encrypted, thereby preventing access to confidential data. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to keep data encrypted during its processing, as taught by Hogan, to protect data from illicit viewing. Hogan teaches the processing tools modifying the scrambled content in the abstract, fig. 7, and col. 5 lines 7-30."

The Action acknowledges that there are distinct elements that are claimed in Claim 1, specifically a processor, a memory, one or more output devices, a content player, an operating system, and a scrambling system.

Claim 1 recites in particular, "an operating system stored in the memory and executed on the processor, the operating system having processing tools for processing the content in support of the content player". As discussed above, Hogan teaches that a host processor performs error correction on an encrypted or scrambled data block. This is the only "processing" that is performed by the host processor. Furthermore, Hogan particularly states that the "host 701 does not have access to the actual information in the data block as it would appear in its unencrypted form". The processing in Hogan is performed by a host processor, not processing tools that are part of an operating system as recited in claim 1. Claim 1 recites a discrete element of a processor and an operating system. There is no teaching or suggestion in Hogan to combine or include the function (i.e., the

encryption coding processing) performed in its processor with an operating system.

Accordingly, the prior art and Hogan do not teach every element of claim 1, and the rejection of claim 1 is therefore improper. Applicant respectfully requests that the §103 rejection of claim 1 be withdrawn.

Dependent claims 2, 5, 8, 10 and 14 depend from and comprise all the elements of claim 1. As such, dependent claims 2, 5, 8, 10 and 14 are allowable at the least by virtue of their dependency on base claim 1. Applicant respectfully requests that the §103 rejection of claims 2, 5, 8, 10 and 14 be withdrawn.

Claim 3 is rejected under 35 U.S.C. §103(a) over prior art in view of Hogan, and further in view of Schneier (Applied Cryptography). Claim 4 is rejected under 35 U.S.C. §103(a) over prior art in view of Hogan, and further in view of U.S. Patent No. 6,526,091 to Nystrom et al. (Nystrom). Claim 6 is rejected under 35 U.S.C. §103(a) over prior art in view of Hogan, and further in view of U.S. Patent No. 5,991,416 to Bae (Bae). Claim 7 stands rejected under 35 U.S.C. §103(a) over prior art in view of Hogan, and further in view of Marzahn. Claims 4, 9, and 11-13 are rejected under 35 U.S.C. §103(a) over prior art in view of Hogan, and further in view of Nicolai. Applicant respectfully traverses the rejections.

Dependent claims 3, 4, 6, 7, 9, 11-13 depend from and comprise all the elements of claim 1. As such, dependent claims 3, 4, 6, 7, 9, 11-13 are allowable at the least by virtue of their dependency on base claim 1. Applicant respectfully requests that the §103 rejection of claims 3, 4, 6, 7, 9, 11-13 be withdrawn.

Claims 15, 19, 20, 21, and 25 are rejected under 35 USC §103(a) as being unpatentable over prior art in view of U.S. Patent No. 4,188,580 to Nicolai et al

(Nicolai) in view of Hogan and Microsoft Press Computer Dictionary, 3rd ed. Applicant respectfully traverses the rejection.

Independent claim 15 recites "[a] content scrambler for scrambling content, comprising:

> a tone generator and modulator to create periodic sets of tone patterns and to modulate amplitudes of the sets based on a first key;
>
> a random number generator to create a random signal based on the first key and a second key, wherein the second key is provided on a separate channel from the first key; and
>
> an adder to add the sets of tone patterns and the random signal to the content to produce scrambled content.

As presented in the previous response to the Office Action of April 20, 2005, Nicolai teaches a gating module 11, a tracking module 13, and a pseudo-random generator 10 that is part of a transmitter/receiver (see Fig. 1 of Nicolai). The gating module 11 provides a clock signal on a bus 44 (col. 6, line 43 of Nicolai), a resync signal on a bus 45 (col. 6, line 46 of Nicolai), and a XMIT (transmit) signal on bus 50 (col. 7, line 9 of Nicolai). The tracking module 13 provides a sync/masking signal on bus 48 (col. 7, line 35 of Nicolai), and outputs from a low Q filter 26 and high Q filter 27 that provide appropriate filtering in conjunction with timing via respective bus 57 and bus 58 (col. 6, lines 26-29, 35-37). In particular, a push to talk (PTT) signal on bus 47 enables an analog switch 28 connected to low Q filter 26 or an analog switch 29 connected to high Q filter 27. The outputs of the switches 28, 29 are coupled to phase lock loop 55 used to generate a synchronization and masking signal on bus 48.

It was argued by Applicant in the prior response that the outputs that are created from the gating module 11, the tracking module 13, or the two in combination do not teach or suggest a set of tone patterns. The Action in responding to Applicant's arguments, maintains that Nicolai teaches a tone generator and cites Nicolai, col. 4 lines 22-34 which is as follows:

> As an additional function, the tracking signal is added to the information signal during transmission to perform a masking function, which effectively provides further privacy and security of the transmitted information. Additionally, the masking signal also serves as a tracking signal, which enables the receiver to continuously generate the pseudorandom signal code at the same rate that the transmitter is generating the identical code. This enables the receiver to continuously recover the information. Additionally, the presence of the tracking/masking signal in the intermediate signal serves as a lockout signal to prevent unintentional resynchronization ..."

There is no teaching or suggestion as to a tone generator in the cited section or anywhere in Nicolai as argued by the Action.

It was further argued by the Applicant in the prior response to the Office Action of April 20, 2005, that there is no motivation that the outputs of gating module 11 and/or tracking module 13 may be amplitude modulated as recited in claim 15. Furthermore, "to modulate amplitudes" of the outputs of gating module 11 and/or tracking module 13 could affect downstream processes of the transmitted/receiver described in Fig. 1.

The Office Action of April 20, 2005 states that "Nicolai et al do not say that the first key is embodied in the tracking signal as amplitude modulations. The definition of amplitude modulation in the computer dictionary defines it as encoding data in a constant frequency transmission by varying amplitude. Therefore it would have been obvious to a person of ordinary skill in the art of the time the invention was made to include the first key of Nicolai et al in the tracking signal by modulating

the amplitude of the tracking signal, as is well known in the art of communications." Claim 15 particularly recites to "modulate amplitudes of the sets based on a first key", not "modulating the amplitude of the tracking signal".

The Action argues that "Nicolai teaches amplitude modulation at col. 5 lines 20-25". The cited section of Nicolai is as follows:

> The dual multiplier circuit DM 12 includes a transmitter multiplier 36, receiver multiplier 40, conventional inverting amplifier 38, audio amplifier/notch filter 41, and analog switches 35, 37. A speaker 17 is connected to the amplifer(sic)/notch filter 41.

The Action does not address the Applicant's argument as to Nicolai's failure to teach or suggest the element of "modulate amplitudes of the sets based on a first key" and merely cites a section of Nicolai that is supposed to teach amplitude modulation; however, the particular section cited by the Action does not teach amplitude modulation or teaches the specific element to "modulate amplitudes of the sets based on a first key" as recited in claim 15.

Accordingly, Nicolai, Hogan and Microsoft Press Computer Dictionary do not teach every element of claim 15, and the rejection of claim 15 is therefore improper. Applicant respectfully requests that the §103 rejection of claim 15 be withdrawn.

Independent claims 19, 20, 21 and 25 are rejected based on similar reasons as claim 15. Applicant asserts the arguments presented in support of claim 15, in support of claims 19, 20, 21 and 25. Applicant respectfully requests that the §102 rejection of claim 19, 20, 21 and 25 be withdrawn.

Claims 16-17 stand rejected under 35 U.S.C. §103(a) over Nicolai in view of the Microsoft Press Computer Dictionary, 3rd ed. Applicant respectfully traverses the rejection.

Claim 18 is rejected under 35 U.S.C. §103(a) over Nicolai in view of the Microsoft Press Computer Dictionary, 3rd ed. as applied to claim 15 and further in view of Schneier. Applicant respectfully traverses the rejection.

Dependent claims 16-18 depend from and comprise all the elements of claim 15. As such, dependent claims 16-18 are allowable at the least by virtue of their dependency on base claim 15. Applicant respectfully requests that the §103 rejection of claims 16-18 be withdrawn.

Claims 22-24 stand rejected under 35 U.S.C. §103(a) over Nicolai in view of the Microsoft Press Computer Dictionary, 3rd ed. Applicant respectfully traverses the rejection.

Dependent claims 22-24 depend from and comprise all the elements of claim 21. As such, dependent claims 22-24 are allowable at the least by virtue of their dependency on base claim 21. Applicant respectfully requests that the §103 rejection of claims 22-24 be withdrawn.

Claims 26, 29, 32-35 stand rejected under 35 U.S.C. §103(a) over Nicolai in view of the Microsoft Press Computer Dictionary, 3rd ed. Applicant respectfully traverses the rejection.

Dependent claims 26, 29, 32-35 depend from and comprise all the elements of claim 25. As such, dependent claims 26, 29, 32-35 are allowable at the least by virtue of their dependency on base claim 25. Applicant respectfully requests that the §103 rejection of claims 26, 29, 32-35 be withdrawn.

Claim 28 stands rejected under 35 U.S.C. §103(a) over Nicolai in view of Hogan. Applicant respectfully traverses the rejection.

Dependent claim 28 depends from and comprises all the elements of claim 25. As such, dependent claim 28 is allowable at the least by virtue of its dependency on base claim 25. Applicant respectfully requests that the §103 rejection of claim 28 be withdrawn.

Claim 30 stands rejected under 35 U.S.C. §103(a) over Nicolai in view of .S. Patent No. 6,526,145 to Marzahn (Marzahn). Applicant respectfully traverses the rejection.

Dependent claim 30 depends from and comprises all the elements of claim 25. As such, dependent claim 30 is allowable at the least by virtue of its dependency on base claim 25. Applicant respectfully requests that the §103 rejection of claim 30 be withdrawn.

Claim 31 stands rejected under 35 U.S.C. §103(a) over Nicolai in view Schneier. Applicant respectfully traverses the rejection.

Dependent claim 31 depends from and comprises all the elements of claim 25. As such, dependent claim 31 is allowable at the least by virtue of its dependency on base claim 25. Applicant respectfully requests that the §103 rejection of claim 28 be withdrawn.

Claims 36, 39, 48, and 49 are rejected under 35 USC §103(a) as being unpatentable over Nicolai and Hogan, in view of Schneier, as applied to claim 28 above.

Independent claims 36, 39, 48, and 49 are rejected based on similar reasons as claim 15. Applicant asserts the arguments presented in support of claim

15, in support of claims 36, 39, 48, and 49. Applicant respectfully requests that the §103 rejection of claims 36, 39, 48, and 49 be withdrawn.

Claims 37 and 38 stand rejected under 35 U.S.C. §103(a) over Nicolai, Hogan, Schneier, prior art and Marzahn. Applicant respectfully traverses the rejection.

Dependent claims 37 and 38 depend from and comprises all the elements of claim 36. As such, dependent claims 37 and 38 are allowable at the least by virtue of their dependency on base claim 36. Applicant respectfully requests that the §103 rejection of claims 37 and 38 be withdrawn.

Claims 40-41 and 43-44 stand rejected under 35 U.S.C. §103(a) over Nicolai, Hogan, and Schneier. Applicant respectfully traverses the rejection.

Claim 42 stands rejected under 35 U.S.C. §103(a) over Nicolai, Hogan, Schneier, and Bae. Applicant respectfully traverses the rejection.

Claims 45 and 46 stand rejected under 35 U.S.C. §103(a) over Nicolai, Hogan, Schneier, and Microsoft Press Computer Dictionary, 3rd ed. Applicant respectfully traverses the rejection.

Claim 47 stands rejected under 35 U.S.C. §103(a) over Nicolai, Hogan, Schneier, prior art and Marzahn. Applicant respectfully traverses the rejection.

Dependent claims 40-47 depend from and comprise all the elements of claim 39. As such, dependent claims 40-47 are allowable at the least by virtue of their dependency on base claim 39. Applicant respectfully requests that the §103 rejection of claims 40-47 be withdrawn.

Claims 50 and 51 stand rejected under 35 U.S.C. §103(a) over Nicolai, Hogan, and Schneier. Applicant respectfully traverses the rejection.

Dependent claims 50 and 51 depend from and comprise all the elements of claim 49. As such, dependent claims 50 and 51 are allowable at the least by virtue of their dependency on base claim 49. Applicant respectfully requests that the §103 rejection of claims 50 and 51 be withdrawn.

Claims 53 and 54 are rejected under 35 U.S.C. §103(a) over Shepard in view of Nicolai and the Microsoft Press Computer Dictionary, 3rd ed. Applicant respectfully traverses the rejection.

Independent claim 53 recites in part "producing periodic sets of tone patterns having varying amplitudes based on a first key".

The Action argues that Nicolai teaches this element; however, as discussed above, in support of claim 15, Nicolai fails to teach a first key as a basis to produce tone patterns having varying amplitudes.

Accordingly, Shepard, Nicolai, and Microsoft Press Computer Dictionary do not teach every element of claim 53, and the rejection of claim 53 is therefore improper. Applicant respectfully requests that the §103 rejection of claim 53 be withdrawn.

Claim 54 depends from and comprises all the elements of claim 53. As such, dependent claim 54 is allowable at the least by virtue of its dependency on base claim 53. Applicant respectfully requests that the §103 rejection of claim and 54 be withdrawn.

Independent claims 55 and 57 are rejected based on similar reasons as claim 15. Applicant asserts the arguments presented in support of claim 15, in support of claims 55 and 57. Applicant respectfully requests that the rejection of claims 55 and 57 be withdrawn.

Dependent claim 56 depends from and comprises all the elements of claim 55. As such, dependent claim 56 is allowable at the least by virtue of its dependency on base claim 55. Applicant respectfully requests that the §103 rejection of claim 56 be withdrawn.

Conclusion

Claims 1-51, and 53-60 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. Should any matter in this case remain unresolved, the undersigned attorney respectfully requests a telephone conference with the Examiner to resolve any such outstanding matter.

Respectfully Submitted,

Date: 10/27/05

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